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Two new species of *Septobasidium* (*Septobasidiaceae*) from Yunnan Province in China

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ABSTRACT —Two new species, *Septobasidium fissuratum* on *Castanea* sp. associated with *Pseudaulacaspis* sp. and *Septobasidium heliciae* on *Helicia nilagirica* associated with *Lepidosaphes* sp., are described.

KEY WORDS —*Pucciniomycetes*, *Septobasidiales*, taxonomy

Two new species of *Septobasidium* were recently discovered from Yunnan Province. These specimens, collected by Dr. Shuanghui He, are described below.

Septobasidium fissuratum Wei Li bis & L. Guo, **sp. nov.** FIGS 1–7

FUNGAL NAME FN 570061

Differs from *Septobasidium meridionale* by its larger basidia.

TYPE: China, Yunnan Province, Longchuan, Longba, alt. 1000 m, on *Castanea* sp. (*Fagaceae*), associated with *Pseudaulacaspis* sp. (*Diaspididae*), 31.X.2012, S.H. He YN08 (HMAS 244419, **holotype**).

ETYMOLOGY: The epithet refers to the fissures of basidiomata.

Basidiomata on branches, 10–14 cm long, 2.5–6 cm wide, pale cinnamon-brown or cinnamon-brown; margin determinate, surface smooth, with many fissures at maturity. In section 600–1100 µm thick, composed of 3–4 layers. Subiculum brown, 30–50 µm thick. Pillars brown, 100–180 µm high, 30–100 µm wide, branched outwards to form a hyphal layer 350–700 µm high, then forming 20–40 µm thick horizontal layer, from which the fungal hyphae successively producing hyphal layers at maturity. Hymenium hyaline or brownish, 60–100

1

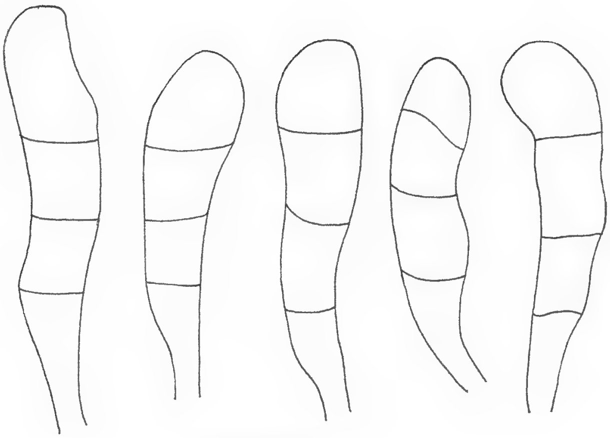

Fig. 1. *Septobasidium fissuratum* (HMAS 244419, holotype). Basidia.

µm thick. Basidia arising directly from the hyphae without a probasidial cell, cylindrical, straight or slightly curved, 4-celled, 32–45 × 6–9 µm, hyaline or brownish. Basidiospores not seen. Haustoria consisting of irregularly coiled hyphae.

Comments: *Septobasidium fissuratum* is similar to *S. meridionale* C.X. Lu & L. Guo, but the latter has fewer fissures on the basidiome surface, an inconspicuous horizontal layer in the section, and smaller basidia, 27–36 × 7–9.5 µm (Lu & Guo 2010b).

Septobasidium heliciae Wei Li bis & L. Guo, **sp. nov.** Figs 8–14

Fungal Name FN 570062

Differs from *Septobasidium septobasidioides* by its wider pillars and smaller basidia.

Type: China, Yunnan Province, Yingjiang, Tongbiguan Nat. Res., alt. 1250 m, on *Helicia nilagirica* (*Proteaceae*), associated with *Lepidosaphes* sp. (*Diaspididae*), 29.X.2012, S.H. He YN07 (HMAS 244418, **holotype**).

ETYMOLOGY: The epithet refers to the substrate plant genus.

Basidiomata on branches, 4–13 cm long, 4–5 cm wide, white or pale cinnamon-brown; margin determinate, surface smooth. In section 750–1100 µm thick.

Figs. 2–7 *Septobasidium fissuratum* (HMAS 244419, holotype). 2. Basidiomata on branch. 3–4. Sections of basidiomata (arrow shows horizontal layer). 5–6. Basidia (arrows). 7. Haustoria.

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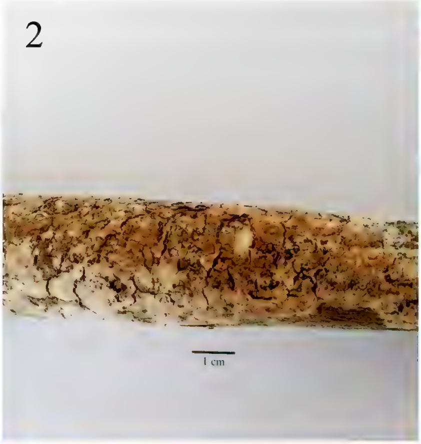

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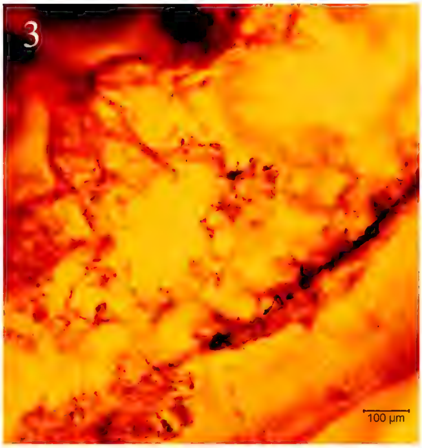

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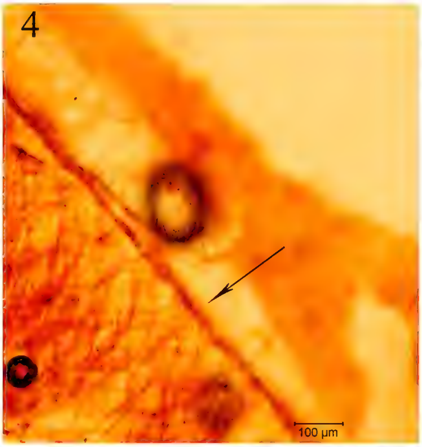

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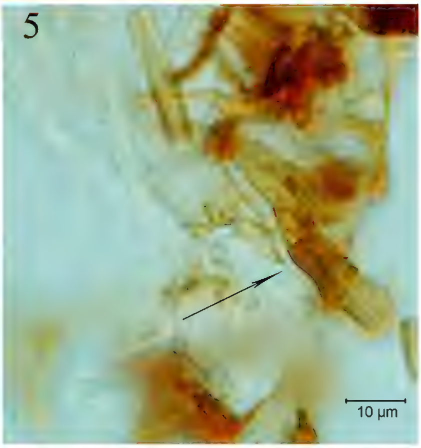

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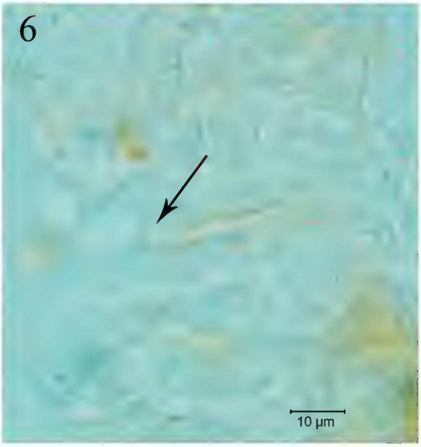

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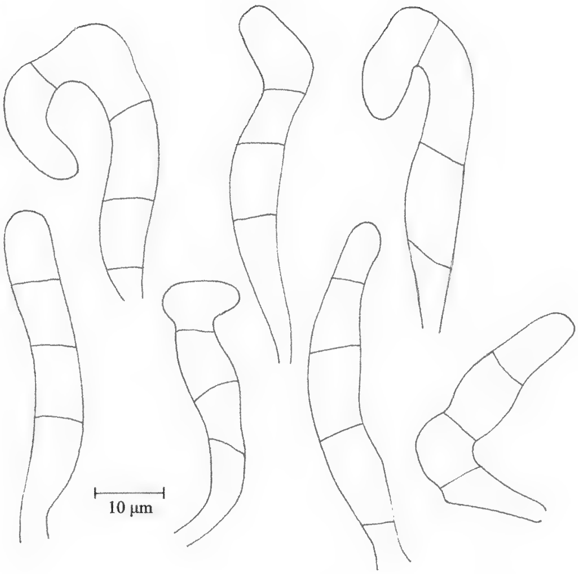


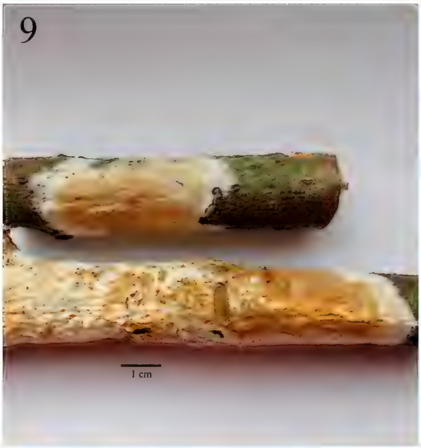
Fig. 8. *Septobasidium heliciae* (HMAS 244418, holotype). Basidia.

Subiculum brown, 10–20 µm thick. Pillars brown, 120–600 µm high, 30–120 µm wide, branched outwards to form a hymenial layer. From the old hymenium successively forming new hyphal layer or pillars and hymenium. Hymenium hyaline or brownish, 80–110 µm thick, with irregularly arranged hyphae. Basidia arising directly from the hyphae without a probasidial cell, cylindrical, straight or curved, 4-celled, 30–45 × 5–6.5 µm, hyaline or brown. Basidiospores not seen. Haustoria consisting of coiled hyphae.

Comments: *Septobasidium heliciae* is similar to *S. septobasidioides* (Henn.) Höhn. & Litsch., but the latter has basidiomata with lobed wings, slender pillars (10–25 µm wide), and larger basidia (40–55 × 8.4–10 µm; Couch 1938).

Including the two new species reported in this paper, 51 *Septobasidium* species have now been reported in China (Sawada 1933, Couch 1938, Teng 1963, Tai 1979, Kirschner & Chen 2007, Lu & Guo 2009a,b,c, 2010a,b,c, 2011, Lu et al. 2010, Chen & Guo 2011a,b,c,d, 2012a,b,c).

Figs. 9–14. *Septobasidium heliciae* (HMAS 244418, holotype). 9. Basidiomata on branches. 10–11. Sections of basidiomata. 12–13. Basidia. 14. Haustoria.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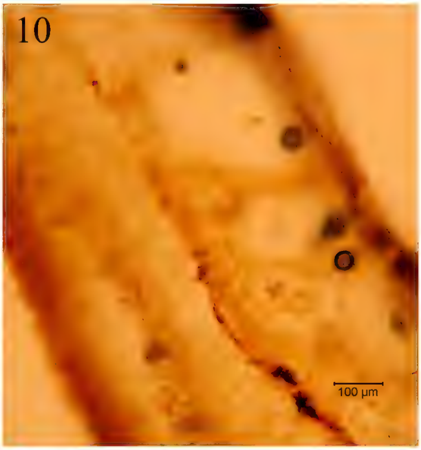
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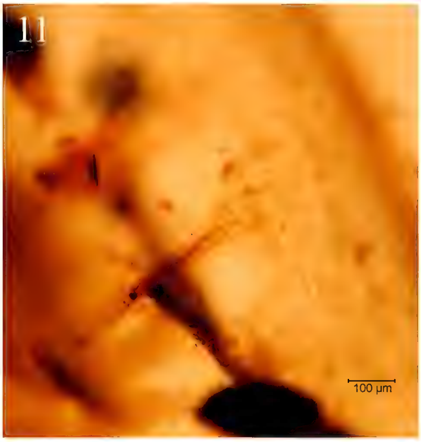
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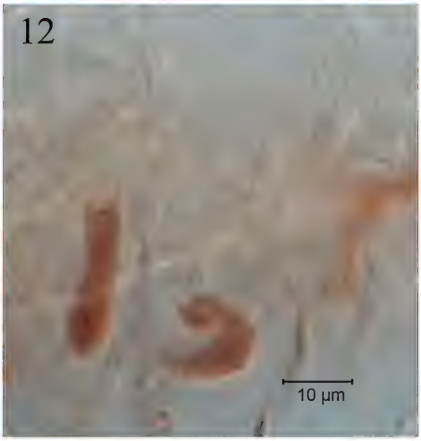
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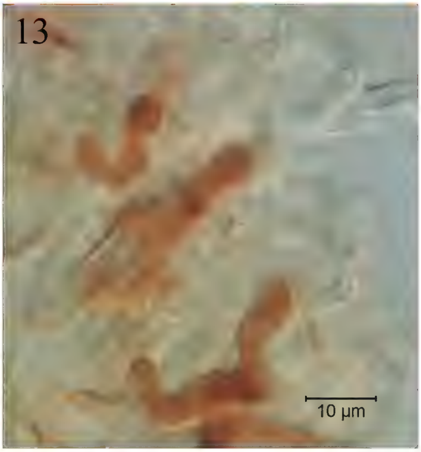
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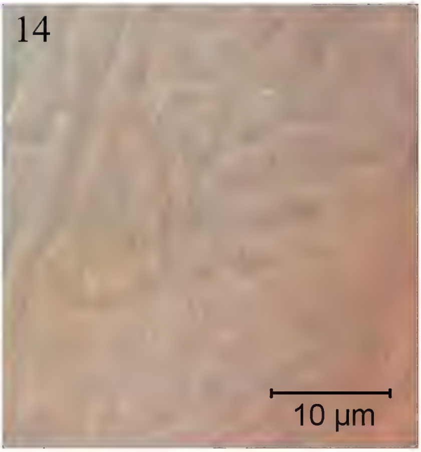
10 µm


14
10 µm

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